COLORADO
Water Quality Control Division
Department of Public Health & Environment

WATER QUALITY CONTROL DIVISION
SAFE DRINKING WATER PROGRAM POLICY

POLICY TITLE: New Public Water System Capacity Planning Manual	
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Approved by :

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Safe Drinking Water Program Manager

New Public Water System Capacity Planning Manual (NPWSCPM)

Figures

Attachments

1 Background information

The 1996 Amendments to the federal Safe Drinking Water Act (SDWA) required each state to develop a program to ensure all new community water systems and new non-transient, non-community (NTNC) water systems beginning operations after October 1, 1999 to demonstrate the technical, managerial and financial (TMF) capacity to comply with the national primary drinking water regulation in effect or likely to be in effect prior to starting operations. The Colorado Department of Public Health and Environment (department) enacted regulations establishing that owners of new community or NTNC public water systems demonstrate adequate capacity to construct, operate and manage the new public waterworks.

This NPWSCPM (manual) is intended to guide new public water systems on the minimum information required by the department to review TMF capacity. This document serves as a tool for both the department and the new public water system to understand, document and review the TMF capacity for the management and operation of the water system.

1.1 Document organization

This manual provides general background information on the purpose and objectives of Colorado's capacity development program and provides a format for submitting required information used by the department to evaluate the TMF capacity of new community and NTNC public water systems. Section 5 of this manual includes a fillable PDF form to help new community water systems and new NTNC water systems document their TMF capacity.

Please note, additional resources regarding TMF capacity can be found in Section 4 of this document.

2 Definitions

Many definitions used within this manual are defined within Regulation 11, Section 11.3 and also repeated here for convenience. The definitions within Regulation 11 may be updated periodically and take precedence if any differences exist.

1. **Begin construction** - initiation of the physical effort to construct a project, excluding engineering, architectural, legal, fiscal and economic investigations, studies, and completion of plans and specifications, and surveys. Physical effort includes, but is not limited to, site clearance, excavation, construction, or the establishment of an office or construction building on site (Regulation 11, Section 11.4(1)(b)(i)).
2. **Community water system** - a public water system that supplies at least 15 service connections used by year-round residents or that regularly supplies at least 25 year-round residents (Regulation 11, Section 11.3(10)).
3. **Financial capacity** - a water system's ability to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA requirements (Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996).
4. **Managerial capacity** - the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements. Managerial capacity refers to the system's institutional and administrative capabilities (Capacity Development Guidance).
5. **New waterworks** -
    a. Any newly constructed public water system; or

b. An existing system that becomes, by definition, a public water system by extending its infrastructure through physical expansion by virtue of increasing the number of connections, the number of individuals served, or by extending the number of days of service (Regulation 11, Section 11.4(1)(b)(iii)).

6. **Non-transient, non-community water system (NTNC)**- a public water system that regularly serves a population of at least 25 of the same people for at least six months per year and is not a community water system (Regulation 11, Section 11.3(48)).
7. **Public water system or PWS** - a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year. A public water system is either a community water system or a non-community water system. Such term does not include any special irrigation district. Such term includes:
    a. Any collection, treatment, storage, and distribution facilities under control of the supplier of such system and used primarily in connection with such system.
    b. Any collection or pretreatment storage facilities not under such control, which are used primarily in connection with such system (Regulation 11, Section 11.3(57)).
8. **Supplier of water or supplier** - any person who owns or operates a public water system (Regulation 11, Section 11.3(74)).
9. **Technical capacity** - the physical and operational ability of a water system to meet SDWA requirements. It refers to the physical components of the water system, including the adequacy of source water and the adequacy of treatment, storage, and distribution infrastructure. The term also refers to the ability of system personnel to adequately operate and maintain the system and use required technical knowledge (Capacity Development Guidance).
10. **Transient, non-community water system** - a non-community water system that serves a population of at least 25 people per day for at least 60 days per year and is not a non-transient, non-community water system or a community water system (Regulation 11, Section 11.3(77)).
11. **Water system capacity** - the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Capacity has three components: technical, managerial, and financial. Adequate capability in all three areas is necessary for a system to have "capacity (Capacity Development Guidance).

3 General information and frequently asked questions

3.1 Which public water systems must submit a TMF capacity evaluation?

To ensure new public water systems have adequate TMF capacity to build, manage and operate a new waterworks, the department reviews the TMF capacity of the new public water system's against the requirements within this manual. This evaluation is required for all new public water systems that are classified:

- New community water systems commencing operations after October 1, 1999.
- New non-transient, non-community (NTNC) water systems commencing operation after October 1, 1999.

There are several scenarios that trigger the requirement to submit a TMF capacity assessment. For example:

1. A new prospective water system may be constructed that will meet the definition of a public water system on the first day of operations (e.g. office building, school, etc.). For this scenario, the system can begin operations after:
    - the water system has demonstrated TMF capacity,
    - the department has issued design approval in accordance with the *State of Colorado Design Criteria for Potable Water Systems*,
    - and the project engineer certified the system has been constructed according to the design approval and final plans and specifications.

    Prior to beginning construction of a new community or NTNC, all requirements of the capacity review must be in place. The department expects that the prospective system will submit a TMF capacity assessment six months prior to the date the system anticipates meeting the definition of a public water system.

2. An existing water system may not initially meet the definition of a public water system, but may eventually meet the definition through expansion of population or taps (e.g. housing development). For this scenario, the department must approve of the TMF capacity assessment and the plans and specifications for any existing waterworks and any proposed improvements or modifications in use at the time the system meets the definition of a public water system.
    At the time the system meets the definition of a public water system, the design review must be approved and all requirements of the capacity review must be in place. The department expects the prospective system will submit a TMF capacity assessment six months prior to the date the system anticipates meeting the definition of a public water system.

3. An existing water system can be a "found" water system, meaning that the water system currently meets the definition of a public water system, but did not meet the definition prior to October 1, 1999 and has not previously received approval of the TMF capacity assessment. For this scenario, the system must work with the department and submit a TMF capacity assessment in a timely manner to comply with Regulation 11.

For the purposes of this manual, new water systems and prospective new water systems that expect to become public systems within the next six months will be collectively referenced as new water systems. Colorado requires all new water systems to meet the capacity requirements contained within this manual.

Approval of a TMF capacity assessment by the department does not relieve the responsibility of the design engineer and/or water supplier for successful implementation of the project nor does it relieve the supplier of water from the responsibility of proper operation of the water system and compliance with Regulation 11. Please refer to Section 4 for links to Regulation 11 and additional resources referenced in this manual.

3.2 Why is a TMF capacity assessment required?

The requirements for demonstrating TMF capacity are established within the Safe Drinking Water Act amendments of 1996. Based on the regulatory authority granted via the Safe Drinking Water Act and implemented by the State of Colorado in Regulation 11, Section 11.4(1)(a), prior to beginning construction, new community and NTNC water systems must submit a complete capacity assessment and receive department approval.

Specific authority to review TMF capacity assessments is given under Regulation 11, Section 11.4(1)(a), which states:

> *For new community or non-transient, non-community water systems, the supplier must not begin construction of the new water system until the supplier completes and receives department approval of a capacity (technical, managerial, and financial) assessment using the criteria found in the* New Public Water System Capacity Planning Manual.

In addition to the requirements contained within this manual, Regulation 11, Section 11.4(1)(b) specifies approval for plans and specifications for construction or use of waterworks. Section 11.4(1)(b) states:

> *For all public water systems, the supplier must not begin construction of any new waterworks, make improvements to or modify existing waterworks, or begin using a new source until the supplier submits and receives department approval of plans and specifications for such construction, improvements, modifications, or use.*

Further, Sections 11.4(1)(b)(v) and 11.4(1)(b)(vi) state:

11.4(1)(b)(v) *Decisions regarding the review and approval of plans and specifications for new waterworks or improvements or modifications to existing waterworks shall be based on conformance to the design criteria developed by the department specified in Policy DW- 005, State of Colorado Design Criteria for Potable Water Systems.*

11.4(1)(b)(vi) *The department shall grant approval upon finding that the proposed facilities conform to the design criteria specified in Policy DW-005, State of Colorado Design Criteria for Potable Water Systems, and are capable of continuously complying with all applicable laws, standards, rules and regulations.*

3.3 Which public water systems must submit a plans and specifications submittal?

For all new community and new NTNC water systems, a TMF capacity assessment must be submitted along with the plans and specifications when required. Plans and specifications shall meet the requirements of the design criteria. All new community water systems and NTNC water systems must demonstrate compliance with both this manual and the design criteria prior to receiving department approval.

New public water systems that include water treatment and/or potable water storage tanks require submission of a plans and specifications for department review. If the new public water system includes distribution only without treatment or potable water storage, plans and specifications submission is not required.

For new community or NTNC water systems where plans and specifications are not required, the department will review the technical capacity of the system through information provided in Section 5.3 of the TMF capacity assessment form.

3.4 Does the department have a visual representation of the work flow and start of operations?

Refer to Figure 1 for a flow chart depicting the process for work flow and start of operations for all new public water systems.

Figure 2 provides a checklist of the TMF capacity assessment. The checklist can be used along with a supporting report as an alternative means for documenting TMF capacity, in lieu of the TMF capacity assessment form in Section 5. The checklist format may be useful for systems with large amounts of documentation to support their TMF capacity assessment where the form does not provide adequate space to respond to requirements. For systems that chose to use the checklist format, the checklist must be accompanied by a report to provide the required information and all additional required attachments. The report must utilize the same outline as the TMF capacity assessment form.

3.5 How should a TMF capacity assessment be prepared?

The TMF capacity assessment must be completed in its entirety, including all applicable attachments. Attachments must be incorporated into the document with their respective cover sheet. If the form does not provide adequate space for needed text, the department will accept TMF capacity assessments that do not utilize the form; however, the TMF capacity assessment must utilize this manual's outline to provide the information required. If the form is not used, please utilize bookmarks to separate attachments in the electronic document.

Please note that the department expects that the TMF capacity assessment and plans and specifications review will be conducted concurrently, when required (see Section 3.3). Thus, the plans and specifications shall be submitted with the TMF capacity assessment as Attachment 4. NTNC water systems with groundwater sources may utilize the Pre-Accepted Non-Community Groundwater Source/Treatment/Storage Drinking Water Design submittal. Links to the applicable design submittal forms are provided on the Attachment 4 cover page.

Additional resources regarding TMF capacity can be found in Section 4 of this manual. These resources can be used to help complete the TMF capacity assessment.

The department is available for pre-application meetings as requested by the proposed system. Please contact the engineering section at 303-692-6298 to request a pre-application meeting or for other questions regarding submittal preparation.

3.6 How should the TMF capacity assessment be submitted?

Please submit your TMF capacity assessment electronically (email, ftp, or CD) to the engineering section. Submittals can be emailed to cdphe.wqengreview@state.co.us

3.7 When should a TMF capacity assessment be submitted?

Per Regulation 11, a new public water system is required to receive approval of the TMF capacity assessment (reviewed against the requirements within this manual) and new waterworks plans and specifications (reviewed against the requirements in the design criteria) prior to beginning construction of any new waterworks or improvements. However, Regulation 11 does not apply to water systems until the water system meets the definition of a public water system, as defined by the regulation. This can create a regulatory paradox for prospective systems. To address this, the department expects that prospective systems will submit a TMF capacity assessment six months prior to the date the system anticipates meeting the definition of a public water system. For prospective water systems that anticipate meeting the definition of a public water system more than six months in the future but are seeking comment from the department, please contact the department to discuss available options for review of TMF capacity. The department is also available for a pre-submittal meeting to discuss applicable regulations and expectations.

4 Additional resources

1. **Water Quality Control Division website**
   www.colorado.gov/cdphe/wqcd
2. **Regulation 11, Colorado Primary Drinking Water Regulations**
   www.colorado.gov/sites/default/files/11_2015%2805%29.pdf
3. **Design Criteria for Potable Water Systems**
   www.colorado.gov/cdphe/wq-design-criteria-potable-water-systems-policies
4. **Tools for drinking water facilities and managers**
   www.colorado.gov/cdphe/tools-drinking-water-facilities-managers
5. **Regulation 100, Water and Wastewater Facility Operators Certification Requirements**
   www.colorado.gov/sites/default/files/100_2015%2808%29.pdf
6. **Drinking water monitoring plan templates**
   www.colorado.gov/cdphe/monitoringplans
7. **Municipal water efficiency plan guidance**
   cwcb.state.co.us/technical-resources/water-conservation-plan-development-guide/Pages/main.aspx
8. **Policy 7, Backflow Prevention and Cross-connection Control Rule Implementation Policy**
   www.colorado.gov/sites/default/files/WQ-DW-Policy7BackflowPreventionAndCrossConnectionControl.pdf
9. **Backflow Prevention and Cross-Contamination Control Plan Template**
   www.colorado.gov/sites/default/files/APPENDIX%20A%20BPCCC%20Program%20Template.docx
10. **Water quality operation and maintenance manual**
    www.colorado.gov/cdphe/wq-operation-and-maintenance-manual
11. **Water system self-evaluation**
    drive.google.com/file/d/0Bzn1y1iSZbwrcldDT2E5WWpJRUU/edit
12. **Financial tools for facilities and managers**
    www.colorado.gov/cdphe/drinking-water-facilities-managers-financial-tools
13. **Checkup program for small systems (CUPSS)**
    CUPSS is a free, easy-to-use, asset management tool for small drinking water and wastewater utilities. CUPSS provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Information available at: water.epa.gov/infrastructure/drinkingwater/pws/cupss/index.cfm
14. **Local assistance unit (LAU)**
    The Water Quality Control Division LAU provides resources and assistance for public water systems including help with development of technical, managerial and financial resources. More information available at: www.colorado.gov/cdphe/tools-drinking-water-facilities-managers or by contacting David Dani at 303-692-3605 or david.dani@state.co.us.
15. **EPA guidance**
    Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act of 1996. Available at: www.epa.gov/safewater/smallsystems/pdfs/guidfin.pdf
16. **Capacity development guidance**
    Guidance on Implementing the Capacity Development Provisions of the Safe Drinking Water Act Amendments of 1996. Available at: nepis.epa.gov/

5 TMF capacity assessment form

5.1 General information

System name: Click here to enter text.

PWSID (if applicable):

Applicant information:

Name: Click here to enter text.

Address: Click here to enter text.

Email: Click here to enter text. Phone: Click here to enter text.

Consulting engineer information (if applicable):

Note: A professional engineer registered in the State of Colorado is not required to prepare the TMF capacity assessment. Professional engineers that do complete the TMF capacity assessment must follow the applicable requirements of the Department of Regulatory Agencies. See Section 3, general information and frequently asked questions, and Attachment 4 for submission of the plans and specifications.

Name: Click here to enter text.

Address: Click here to enter text.

Email: Click here to enter text. Phone: Click here to enter text.

Signatures:

This TMF capacity assessment was prepared by: _____
(Print name)

Signature: _____ Date: _____

Authorized applicant signature: _____ Title: _____ Date: _____

5.2 Executive summary

5.2.1 *Initial and future service area description*

Please describe the initial and future service area for the new water system including the portion of the service area that will serve residents, transients and non-transients. For example, transient users include customers at restaurants, convenience stores, campgrounds, etc. Non-transient users include schools, office buildings, etc. Please also indicate the design planning period and why the design planning period was selected.

5.2.2 *Initial and future population and demands*

Use the tables below to provide initial and future population and average day and peak water demands. Please refer to Section 5.3.2 for additional information and tools for population and demand projections.

Initial service area population: Click here to enter text.

User type	Population	Average day demand	Peak demand
Residents			
Non-Transients			
Transients			

Anticipated future population based on design planning period: Click here to enter text.

User type	Population	Average day demand	Peak demand
Residents			
Non-Transients			
Transients			

5.2.3 *Proposed facilities*

Provide a description of the proposed source and source area, treatment type, potable water storage and distribution system including pressure zones.

5.3 Technical capacity

5.3.1 *Planning area description*

5.3.1.1 Project area map

Provide a map showing a minimum three mile radius around the project area that includes environmental features (lakes, streams, wetlands, floodplains). Map must include initial and future service area for the design planning period, proposed drinking water facilities (plants, major distribution lines, water sources, storage facilities), existing and proposed wastewater outfalls/permitted discharge points and any new or affected sources with regard to the pertinent watershed or source water area. Include the map as Attachment 1.

5.3.1.2 Regional plan

Is the project within or near an area included in a regional long term plan?

☐ Yes ☐ No

If yes, describe how the project is conformance with the long term plan and any other planning limitations.

5.3.1.3 Local and regional issues

Were local and regional planning efforts considered, including water quality and/or quantity?

☐ Yes ☐ No

Please describe.

Was consolidation with another water system/treatment facility considered?

☐ Yes ☐ No

If yes, describe the consolidation considerations. If no, please indicate why consolidation was not considered.

5.3.2 *Population and water demand projections*

For a proposed planning period, forecast the population growth, projected increase in Equivalent Residential Taps (ERT), and projected drinking water demands.

Population and demand projections - The division generally accepts two methodologies for projecting water flows over the proposed planning period. Other methodologies may be acceptable with a clear explanation and listing of all assumptions and parameters:

☐ Method 1: Population based projections. Recommended for primarily residential systems and/or for systems without water meter data.

☐ Method 2: Equivalent Residential Taps (ERT) Analysis. Recommended for systems with a high multifamily, commercial, industrial, irrigation demands.

Method 1 and 2 templates can be found at in Attachment 2.

Attach the population projection as Attachment 2.

Discuss supporting data and reasons for projected future growth during the proposed planning period. Include existing data sources (e.g., census data, water flow data) and any assumptions (e.g., growth rate).

5.3.3 *Source water planning*

5.3.3.1 Overall water resource management description

For the proposed planning period, describe the new water system's water resource management plan and source water area. Include a discussion of the source water, primary water quality parameters of concern, seasonal variability and availability. Summarize anticipated flow conservation measures.

5.3.3.2 Source water supply capacity

For the proposed planning period, discuss if the proposed source water supply infrastructure is capable of delivering adequate source water to meet projected needs. If fire flow will be provided by the new water system, include fire flow considerations in the description.

5.3.3.3 Water rights

Describe the new water system's water rights and if the water rights are sufficient to meet the system's projected water demands.

Include copies of supporting documentation for water rights or other supply agreements as attachment 3.

5.3.4 *Proposed facilities*

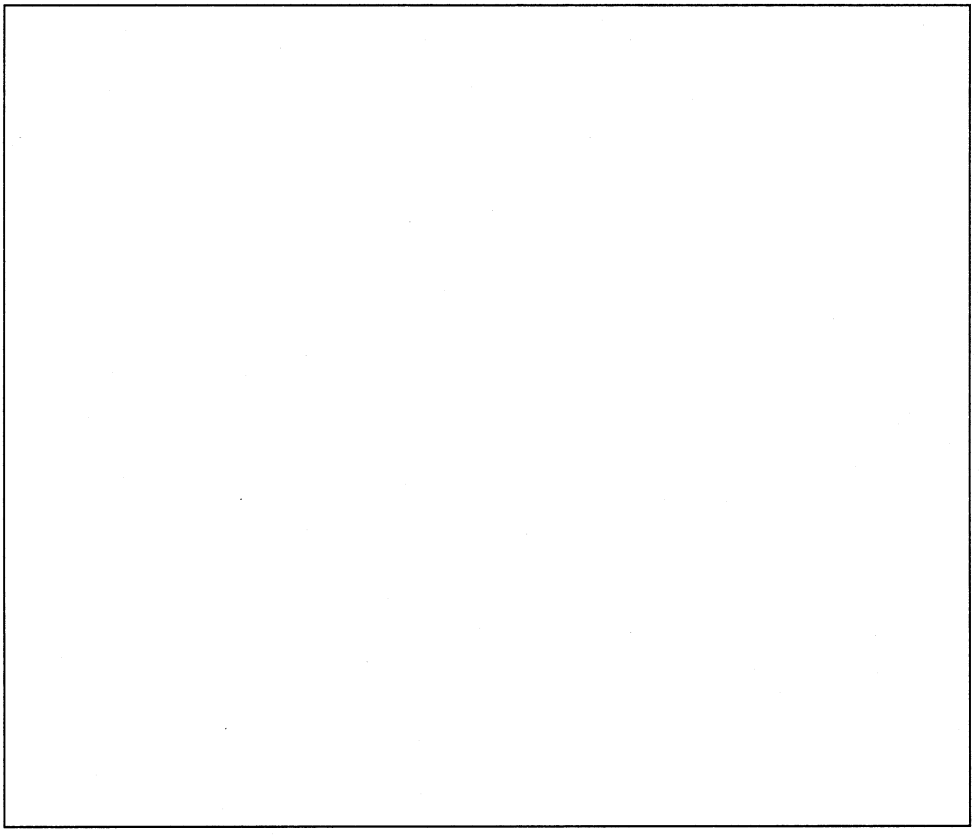
5.3.4.1 Proposed sources, treatment and storage

Provide the plans and specifications for the proposed sources, treatment and storage infrastructure as Attachment 4. Links to the applicable design submittal forms to accompany the plans and specifications are provided on the Attachment 4 cover page. Non-transient, non-community water systems with groundwater sources may utilize the Pre-Accepted Non-Community Groundwater Source/Treatment/Storage Drinking Water Design submittal. All other community and non-transient non-community water systems must use Appendix B of the design criteria.

5.3.4.2 Proposed distribution

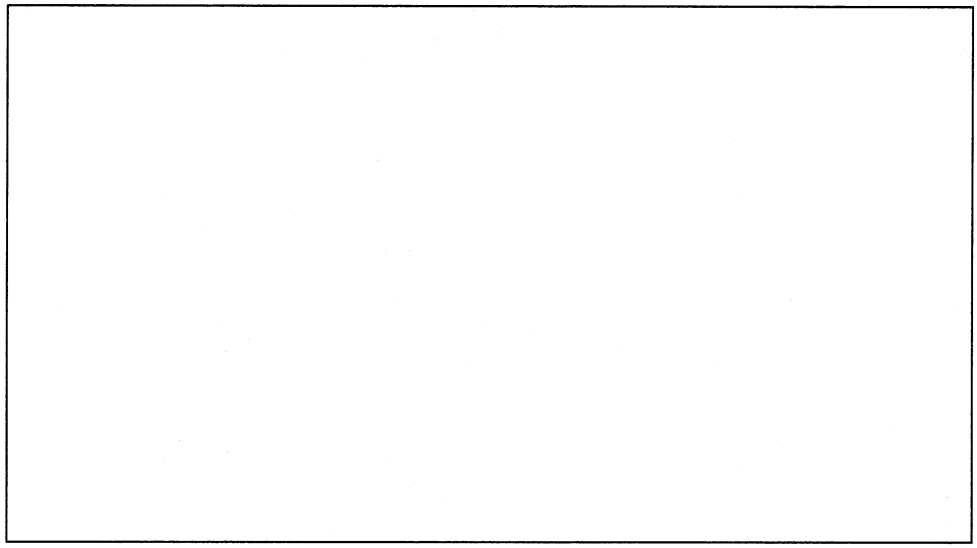
Overall distribution system description

Discuss the proposed finished water distribution system including: gravity vs. pumped pressurization, material type, condition of materials, number of pressure zones, fire flow requirements, pump stations, and storage tanks.



Pressure

The distribution system must be designed to maintain a minimum pressure of 20 psi at all ground level points in the distribution system under all conditions of flow as required in the design criteria. The design criteria also recommends a normal working pressure in the distribution system of approximately 60 psi, and not less than 35 psi. Near storage tanks, the water main pressure will be less than the required pressures stated above. The department expects water systems to mitigate low pressure around storage tanks and to minimize the amount of distribution main impact. When fire protection is to be provided, system design should be such that fire flows and facilities are in accordance with the requirements of the appropriate regulatory authority (e.g. Insurance Services Office). Discuss how the distribution system will meet the required and recommended distribution system pressures.



Schematic

Provide a schematic or design drawings of the proposed distribution system as Attachment 5. This schematic may be included in the project area map described in Section 5.3.1.1, if appropriate.

5.3.5 *Staffing*

Explain how the system has adequate staffing considering proposed treatment, to operate and maintain the system from source to tap and consistently provide safe drinking water that meets all state and federal regulations. Please note that certified operators must be accountable for performing as a minimum, the duties delineated by Regulation 100. If other workers perform these duties, written delegation of duties is expected along with a statement of constraints or conditions requiring consultation with the ORC prior to making adjustments that could affect the quality of the finished water. Please include delegation of tasks as applicable in the operations and maintenance manual (See Section 5.4.3.4).

5.4 Managerial capacity

5.4.1 *Legal ownership of system*

Name: Click here to enter text.

Address: Click here to enter text.

Email: Click here to enter text.

Phone: Click here to enter text.

Fax: Click here to enter text.

5.4.2 *Organizational chart*

Include an organizational chart as Attachment 6.

5.4.3 *Plans and policies*

5.4.3.1 Monitoring plan

In accordance with Section 11.5 of Regulation 11, all public water systems are required to comply with the Monitoring Plan Rule. Refer to Section 11.5 of Regulation 11 for additional information on requirements. Include a copy of the monitoring plan as Attachment 7. (The division has template monitoring plans available for use here.)

5.4.3.2 Backflow Prevention and Cross-Connection Control Plan

In accordance with Section 11.39 of Regulation 11, all public water systems are required to comply with the Backflow Prevention and Cross-connection Control Rule. Refer to Section 11.39 of Regulation 11 and Policy 7, Backflow Prevention and Cross-connection Control Rule Implementation Policy for additional information on the requirements. Include a copy of the Backflow Prevention and Cross Connection Control Plan as Attachment 8. (The division has a template backflow prevention and cross connection control plan available for use here.)

5.4.3.3 Water efficiency plan

Water efficiency plans are regulated by the Colorado Water Conservation Board. Water efficiency plans are required for system that will sell over 2,000 acre feet of water annually. Include a copy of the water efficiency plan as Attachment 9. (Additional information about water efficiency plan requirements can be found here.) - ☐Not Applicable

5.4.3.4 Operation and maintenance manual (O&M)

Include an O&M manual as Attachment 10. The O&M manual must be sufficient to meet the needs of the system based on the size of the service area and the scope of the water system. The O&M manual should include, as applicable, a description of the facilities; explanation of start-up and normal operation procedures; sampling schedules; staffing requirements; potential water supply risks; a safety program; delegation of tasks from the certified operators; plans for tracking unaccounted water; available external resources for equipment, emergency water supply, etc.; an emergency response plan; and manufacturer's manuals. (Guidance and a template for O&M manuals can be found here.)

5.4.3.5 Public notification policies

Provide a description of public notification policies as Attachment 11. Describe public education policies, customer complaint policies, and policy for notification of a water quality violation.

5.4.3.6 Ordinance establishing authority

Provide a copy of water system's ordinance or bylaws as Attachment 12 when applicable. The ordinance or bylaws for the water system should give the authority to establish tap fees, water service rates, board members and voting to enable the water system to remain whole.

☐Not Applicable

If not applicable, please explain.

5.4.4 *Operator in Responsible Charge (ORC) requirements*

Please provide the certified treatment operator information below:

Name(s): Click here to enter text.

Operator identification number: Click here to enter text.

Certification number: Click here to enter text.

Certification expiration date: Click here to enter text.

Please provide the certified distribution system operator information below:

Name(s): Click here to enter text.

Operator identification number: Click here to enter text.

Certification number: Click here to enter text.

Certification expiration date: Click here to enter text.

Proposed System Operator Certification Level (check one)

Refer to the Regulation No. 100, Water and Wastewater Facility Operators Certification Requirements for operator certification level requirements.

☐ Staff Operator ☐ Contract Operator

Treatment: ☐ Class D ☐ Class C ☐ Class B ☐ Class A

Distribution: ☐ Class 4 ☐ Class 3 ☐ Class 2 ☐ Class 1

Combined Treatment/Distribution: ☐ Class S ☐ Class T

5.4.5 *Record keeping*

Describe the system's proposed record retention policy that meets the requirements of the Regulation 11 including: record type, retention period, and record location. Electronic copies of these records are acceptable.

5.5 Financial capacity

5.5.1 *Annual budget*

Does/will the new water system prepare an annual budget?

☐Yes ☐No

Does/will the new water system prepare and maintain a capital improvement plan?

☐Yes ☐No

Please provide a narrative of the process for annual budgeting and financial planning. Financial planning ensures that revenues are sufficient to meet operation and maintenance, debt service, and capital requirements, establish cash reserves, and meet debt service coverage requirements. The department has many tools and resources to assist with budget preparation and financial planning, which can be found here.

Provide a copy of the annual and five-year budgets as Attachment 13.

5.5.2 *Financial status*

Describe the current multi-year financial planning for the system including O&M costs, required reserve accounts, rate structure, fees, billing, other capital improvement programs, and the new water system's reserve policies. For existing systems that now meet the definition of a public water system (scenario two or three as described in Section 3.1), please include a description of the system's current financial status and existing debt.

5.5.3 *5-year cash flow projection*

Include a copy of the five year cash flow projection as Attachment 14. Include projected revenues, expenditures, O&M reserve and capital and O&M expenses for the water system.

5.5.4 *Available capital*

Describe the new water system's funding capacity including available sources and limitations for public and/or private capital that are available to the system.

5.5.5 *Audits*

Local governments are required by State Statute (29-1 Part 6 et seq., C.R.S.) to submit audits to the Department of Local Affairs. Please describe the system's policy for preparation and submittal of audit documents.

☐ Not applicable (please explain)

5.5.6 *Insurance*

Does/will the system maintain general liability insurance? While insurance is not a requirement, lack of insurance could affect a system's ability to repay a loan or other obligations if anything should happen. A lack of liability insurance may have an impact on a system's ability to qualify for a loan.

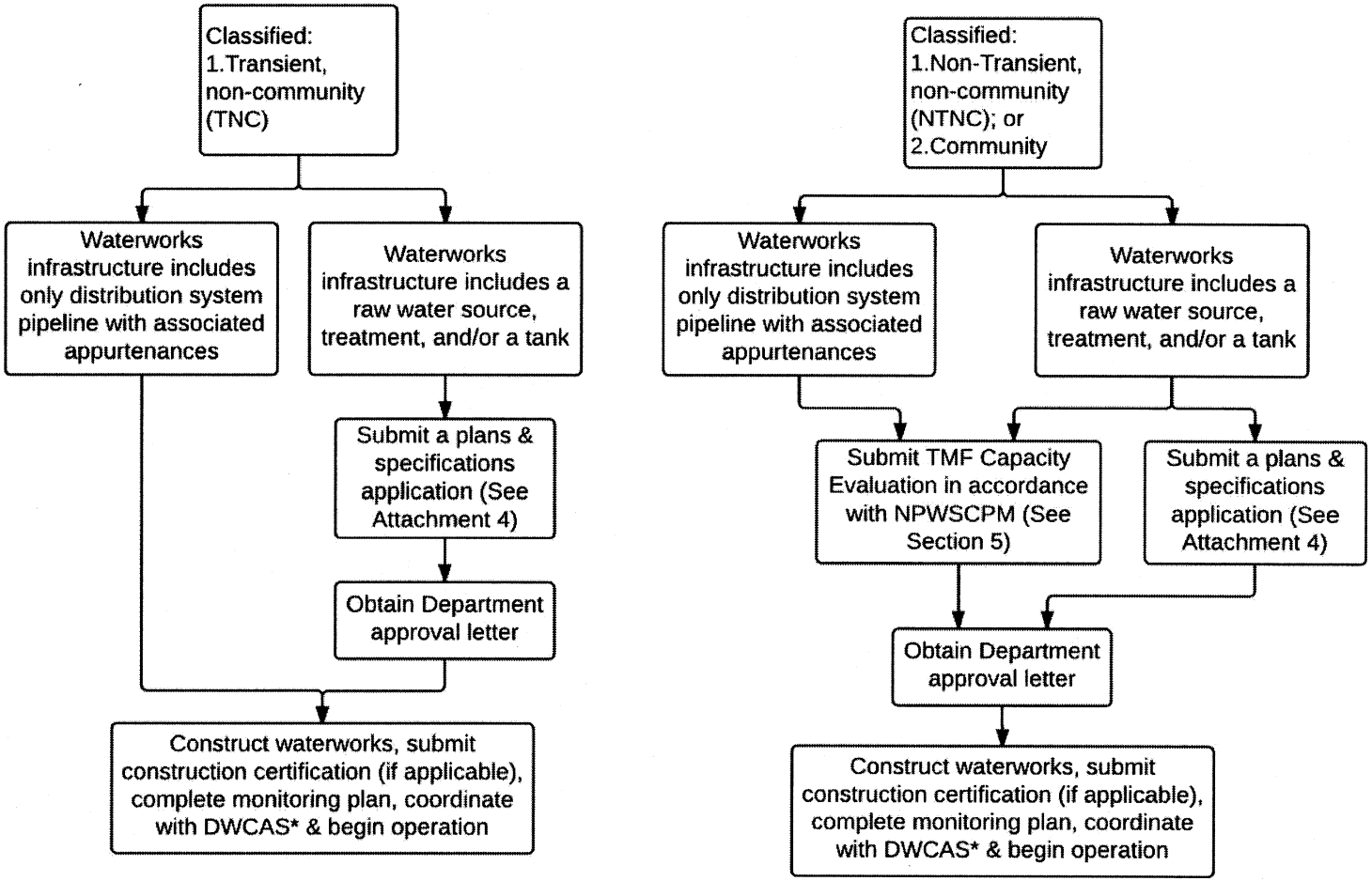
☐ Yes - Include documentation of general liability insurance as Attachment 15.

☐ No, please explain

5.5.7 *Capital costs for infrastructure*

Summarize the capital costs of the new water system infrastructure. The five year cash flow projection included in Attachment 14 must reflect the capital and operation and maintenance costs associated with construction of the water system infrastructure.

Figure 1. Work flow and start of operations



* DWCAS - Drinking Water Compliance Assurance Section

Figure 2. TMF capacity assessment checklist

5.1 General information

System name: Click here to enter text.

PWSID (if applicable):

Applicant information:

Name: Click here to enter text.

Address: Click here to enter text.

Email: Click here to enter text. Phone: Click here to enter text.

Consulting Engineer Information (if applicable):

Note: A professional engineer registered in the State of Colorado is not required to prepare the TMF capacity assessment. Professional engineers that do complete the TMF capacity assessment must follow the applicable requirements of the Department of Regulatory Agencies. See Section 3, general information and frequently asked questions, and Attachment 4 for submission of the plans and specifications.

Name: Click here to enter text.

Address: Click here to enter text.

Email: Click here to enter text. Phone: Click here to enter text.

Signatures:

This TMF capacity evaluation was prepared by: _____
(Print name)

Signature: _____ Date: _____

Authorized applicant signature: _____ Title: _____ Date:_____

5.2 Executive summary			
Capacity requirement	**Applicability (Yes or N/A)***	**Documentation and location within submittal**	**Comments**
5.2.1 Initial and future service area description			
5.2.2 Initial and future population demands			
5.2.3 Description of proposed facilities			

5.3 Technical capacity			
Capacity requirement	**Applicability (Yes or N/A)***	**Documentation and location within submittal**	**Comments**
5.3.1.1 Map showing a minimum of a three mile radius around the project area that includes environmental features, initial and future service area, proposed facilities, existing and proposed wastewater outfalls, and new or affected sources			
5.3.1.2 Conformance with regional long term plans			
5.3.1.3.a Consideration of local and regional planning efforts including water quality and/or quantity			
5.3.1.3.b Consideration of consolidation with another water system/treatment facility			
5.3.2 Forecast for population growth, projected increase in Equivalent Residential Taps(ERTs), and projected water demands			
5.3.3.1 Water resource management plan for the source water			
5.3.3.2 Adequacy of source water to meet projected needs			
5.3.3.3 Water rights description			
5.3. 4.1 Plans and specifications for the proposed sources, treatment, and storage infrastructure			
5.3. 4.2.a Finished water distribution system description			
5.3. 4.2.b Distribution system pressure description			
5.3. 4.2.c Schematic or design drawings of the distribution system			
5.3. 5 Discussion of adequacy of staffing			

* If N/A, provide justification in comment column

5.4 Managerial capacity			
Capacity requirement	**Applicability (Yes or N/A)***	**Documentation and location within submittal**	**Comments**
5.4.1 Legal ownership			
5.4.2 Organizational chart			
5.4.3.1 Monitoring plan			
5.4.3.2 Backflow prevention and cross-connection control plan			
5.4.3.3 Water efficiency plan			
5.4.3.4 Operation and maintenance manual			
5.4.3.5 Public notification policy			
5.4.3.6 Ordinance or bylaw that gives the water system authority to establish tap fees, water service fees, board members, and voting to enable the water system to remain whole			
5.4.4 Operator in responsible charge for the treatment and distribution system that meets the requirements of Regulation 100			
5.4.5 Record retention policy			

5.5 Financial capacity			
Capacity requirement	**Applicability (Yes or N/A)***	**Documentation and location within submittal**	**Comments**
5.5.1.a Annual budget			
5.5.1.b Capital improvement plan			
5.5.1.c 5-year budget			
5.5.2 Description of multi-year financial plan for the system including O&M costs, required reserve accounts, rate structure, fees, billing, other capital improvement programs, and the water system's reserve policies			
5.5.3 5-year cash flow projection			
5.5.4 Description of funding sources available for public and/or private capital			
5.5.5 Policy for preparation and submittal of audit documents			
5.5.6 Documentation of general liability insurance			
5.5.7 Estimate for capital costs for the new water system infrastructure			

* If N/A, provide justification in comment column

Attachment 1

Project area map

Attachment 2

Population projection

☐ Method 1: Population based projections. Recommended for primarily residential systems and/or for systems without water meter data.

☐ Method 2: Equivalent Residential Taps (ERT) Analysis. Recommended for systems with a high multifamily, commercial, industrial, irrigation demands.

☐ Other

Projecting Water Flows Method 1: Population based projections

Assumptions/data			Information source
Current system population		People	
Current service area population (If providing water to neighboring community)		People	
Population growth rates		percent increase/year	
Average daily per capita flow rate		Gallons per capita day	
Maximum daily per capita flow rate		Gallons per capita day	
Peak hour factor			

Year	System population	Service area population (if different)	Average daily flow	Maximum daily flow	Peak hour flow
+0					
+5					
+10					
+15					
+20					

Projecting water flow method 2: Equivalent Residential Taps (ERT)

A	Number of active residential taps - As calculated in the pre-qualification form	
B	Total annual consumption (gallons per year) - residential	
C	Estimated equivalent residential tap water usage Annual flow per ERT=A/B	
D	Total annual consumption (gallons per year) - commercial/industrial/irrigation	
E	Estimated commercial/industrial/irrigation flow in ERT # of commercial/industrial/irrigation ERT = D / C	
F	Total ERTs = A + E	

Population and flow assumptions/data			**Information source**
Current system population		People	
Current service population (if providing water to neighboring community)		People	
Population growth rate		percent increase / year	
Average daily flow per ERT		Gallons per capita day	
Maximum daily per ERT		Gallons per capita day	
Peak hour factor		Gallons per capita day	

Year	System population	Service population (if different)	Residential taps (ERTs)	Multifamily residential taps (ERTs)	Commercial/ industrial taps (ERTs)	Irrigation taps (ERTs)	Total taps (ERTs)	Average daily flow	Maximum daily flow	Peak hour flow
+0										
+5										
+10										
+15										
+20										

Attachment 3

Water rights

Attachment 4

Plans and specifications

☐ Non-Transient Non-Community (NTNC) groundwater system

☐ All other Community and Non-Transient Non-Community water (NTNC) systems

For community water systems, the final plans and specifications design submittal must be prepared by a professional engineer registered in the State of Colorado. For a non-transient, non-community water system the final plans and specifications design submittal is not required to be prepared by a professional engineer.

Attachment 5

Distribution system schematic

Attachment 6

Organizational chart

Attachment 7

Monitoring plan

Attachment 8

Backflow prevention and cross-connection control plan

Attachment 9

Water efficiency plan

Attachment 10

Operation and maintenance manual

Attachment 11

Public notification policies

Attachment 12

Ordinance or bylaws

Attachment 13

Annual and five year budget

Attachment 14

Five year cash flow projection

Attachment 15

Liability insurance documentation